

- Fig. 8. The egg-follicle from the ovary of a mature egg-laying insect.  $\times 200$ .
9. Transverse section of an egg. *mc*, micropyle canal; *ch*, chorion; *v*, vitelline membrane; *cl*, clear yelk; *y*, granular yelk.  $\times 30$ .
10. A longitudinal section of an egg. *mc'*, chamber at anterior pole of the egg; *m*, micropyle.
11. A section of the yelk. *a*, clear margin; *b*, granular yelk.  $\times 400$ .
12. The micropyle.  $\times 400$ .
13. A section through the micropyle.  $\times 400$ .
14. The testes of a larval blowfly, showing the union of the prolongations from which the duct is developed: after Weismann.
15. The gum-gland and some of the adjacent fat-body. *l*, lumen of the gum-gland; *e*, epithelium of gum-gland; *bb*, capsule of fat-cells; *a*, *c*, *d*, stellate and flask-shaped cells enclosed within the capsule.  $\times 200$ .
16. Transverse section of the gum-gland of the mature insect.
17. Transverse section of the gum-gland of the immature insect.
- 18, 19, 20. Epithelial cells from the gum-gland, with the contained corpuscles and nuclei in different stages of development.

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On the Deep-water Fauna of the Clyde Sea-area. By WILLIAM E. HOYLE, M.A. (Oxon.), F.R.S.E., Keeper of the Manchester Museum. (Communicated by JOHN MURRAY, LL.D., Ph.D., V.P.R.S.E., F.L.S.)

[Read 4th April, 1889.]

(With MAP: PLATE XXIX.)

SINCE the establishment of the Scottish Marine Station in the year 1884, Dr. John Murray has conducted an extensive series of dredgings in the greater number of the lochs of the west coast of Scotland. During these operations he was struck, as Forbes had been before him, with the restricted distribution of certain forms, as well as with the fact that some species occurred nowhere off the British shores except in these depressions.

In the summer of last year, Dr. Murray suggested that I

should continue these investigations, and endeavour to render them as complete as possible during the months of July and August, offering at the same time to give me the use of the steam-yacht 'Medusa' for dredging and trawling, and to allow me the use of the materials which he had already accumulated.

Circumstances fortunately allowed of my accepting this offer, and during the two months just mentioned I made Millport, on the Island of Cumbrae, my headquarters, and thence made excursions to all the different parts of what is now known as the "Clyde sea-area."

The physical configuration of this region has been very ably described by Dr. Hugh R. Mill\*, whose communication is illustrated by an admirable orographical and bathymetrical chart. He regards the "Clyde sea-area" "as bounded on the south by a line drawn from the Mull of Cantyre to Corsewell Point in Wigtownshire, almost coinciding with the contour of 50 fathoms;" and within it he defines seven deep-water basins, which have a depth exceeding 20 fathoms, and are separated from each other by ridges, considerably shallower than the extreme depths of the basins themselves.

1. The *Arran* Basin extends on either side of the north of Arran, and up into lower Loch Fyne, being in shape like the letter  $\lambda$ . In the sequel I have regarded it as subdivided into four portions, which may be termed respectively the "Brodick," "Cumbrae," "Kilbrennan," and "Inchmarnoch" basins.

The last of these is the deepest, and, indeed, attains the greatest depth found anywhere in the Firth, namely 107 fathoms off Skate Island. The Kilbrennan and Inchmarnoch Basins are not so distinctly marked off from each other as are the remaining ones, the channel which unites them just reaching the 60-fathom line, the extreme depth of the former being 85 fathoms. The Brodick basin, which is off the bay of the same name, has a depth of 92 fathoms, whilst the Cumbrae basin descends only to 62 fathoms.

2. *Upper Loch Fyne* is 25 miles in length, and has a depth of about 80 fathoms off Strachur.

3. *Loch Striven* runs up into the mainland due north of Rothesay, and attains a depth of a little over 40 fathoms.

\* Scottish Geogr. Mag. iii. pp. 1-7 (1887).

4. The *Dunoon* Basin occupies the channel of the river from the extremity of Great Cumbrae northwards, and extends up into the lower stretch of Loch Long. Its greatest depression off Dunoon is 56 fathoms.

5. *Loch Goil* is only about 4 square miles in area, and its extreme depth is 47 fathoms.

6. *Upper Loch Long* is of about the same extent, but has a depth of only 35 fathoms.

7. The *Gareloch* has an area of about 5 square miles, and is 23 fathoms in depth.

The object which I set before myself was to ascertain as fully as possible the fauna of each of these depressions, limiting them by the contour-line of 20 fathoms, and then with all the materials available to draw up comparative lists, and to endeavour to discover their relations to each other.

Unfortunately I have been unable to make much use of the published works of my predecessors, owing to the form in which their results are stated. "Fairly common in depths of 5-25 fathoms," with a few localities appended, is the type of a phrase which occurs continually, but is, for the purposes of the present inquiry, quite useless. The cases in which I have drawn information from sources other than the records of the Scottish Marine Station are all indicated.

The specimens collected by Dr. Murray had been sent from time to time to the British Museum, and he had received from the authorities of that institution lists of these consignments, along with a number of named duplicates, which were of great help in the identification of my own subsequent acquisitions. I have to acknowledge, with my sincerest thanks, the assistance I have received, not only from the staff of the British Museum, but from several other friends. Mr. David Robertson and the Rev. Canon Norman, whose extensive knowledge of the British marine fauna is well known, were at Millport during the greater part of my stay there, and I had thus the advantage of being able to consult them constantly. Messrs. Isaac C. Thompson and W. S. M'Millan, of Liverpool, have been good enough to draw up lists of the Copepoda for me, and Prof. Herdman has given me the benefit of his acquaintance with the Tunicata. To Dr. John Murray, as above stated, I owe the suggestion of the present investigation, as well as the means of carrying it out.

Before proceeding to enumerate the species obtained, it seems advisable to say a few words regarding the mode of procedure adopted in collecting, for this probably explains certain general features in the results obtained. In the great majority of instances the instrument employed was a shrimp-trawl, which was found on the whole more convenient for working in these localities than the dredge, owing to its bringing up a less amount of mud and a greater variety of forms. Certain groups, such as the Mollusca, are not obtained in such large numbers as by the dredge, and hence the list of these animals obtained is small as compared with that known to inhabit the district.

A tow-net was generally attached a short distance above the trawl, so as to capture any Crustaceans which might be swimming just above the bottom. These were almost invariably found to be of a different species from those taken in the nets which were dragged at the surface.

#### STATEMENT OF RESULTS.

For convenience I have drawn up the results in the form of a Table, with a column corresponding to each basin. The figures show the range in fathoms in that particular region, whilst there is appended in another column a sketch of the distribution of each form outside the British area. Those facts which have been taken from the published writings of others are indicated by italics. A note of interrogation indicates that I have obtained the species in that locality, but the record of the exact depth has been lost. *d* means that dead shells, not living specimens, were obtained.

	ARRAN BASIN.				Upper Loch Fyne.
	Brodick Basin.	Kil- brennan Basin.	Inch- marnoch Basin.	Cumbræ Basin.	
PISCES.					
1. <i>Pristiurus melanostomus</i> (Bonap.)	.....	.....	.....	.. ...	37
2. <i>Acanthias vulgaris</i> , <i>Risso</i> .....	.....	26	.....	.....	38
3. <i>Raja clavata</i> , <i>L.</i> .....	.....	26	.....	.....	.....
4. — <i>fullonica</i> , <i>L.</i> .....	.....	20	100	.....	.....
5. — <i>maculata</i> , <i>Montag.</i> .....	.....	.....	.....	.....	.....
6. <i>Lophius piscatorius</i> , <i>L.</i> .....	70	.....	.....	.....	.....
7. <i>Cottus bubalis</i> , <i>Euphr.</i> .....	.....	60	.....	.....	.....
8. — <i>Lilljeborgii</i> , <i>Collett.</i> .....	15-30	.....	.....	.....	.....
9. — <i>scorpius</i> , <i>L.</i> .....	.....	.....	.....	.....	.....
10. <i>Trigla gurnardus</i> , <i>L.</i> .....	80-90	26-46	.....	.....	.....
11. <i>Triglops Murrayi</i> , <i>Gthr.</i> .....	.....	64	.....	.....	.....
12. <i>Agonus cataphractus</i> , <i>L.</i> .....	.....	20-64	.....	.....	.....
13. <i>Liparis liparis</i> ( <i>L.</i> ) .....	.....	49-64	.....	.....	.....
14. <i>Gobius Jeffreysii</i> , <i>Gthr.</i> .....	.....	20-45	.....	56	.....
15. — <i>minutus</i> , <i>Gm.</i> .....	50-60	26	37	.....	50
16. <i>Callionymus lyra</i> , <i>L.</i> .....	.....	26	.....	.....	.....
17. — <i>maculatus</i> , <i>Raf.</i> .....	.....	26	.....	.....	.....
18. <i>Centronotus gunellus</i> ( <i>L.</i> ) .....	.....	20	.....	.....	.....
19. <i>Stichæus lampetræformis</i> .....	.....	.....	.....	60	.....
20. <i>Gadus æglefinus</i> , <i>L.</i> .....	.....	26	90	.....	.....
21. — <i>fuscus</i> , <i>L.</i> .....	90	.....	.....	.....	.....
22. — <i>Esmarkii</i> , <i>Nilss.</i> .....	.....	26-65	80	.....	.....
23. — <i>merlangus</i> , <i>L.</i> .....	50-60	26-46	90	56	.....
24. — <i>minutus</i> , <i>L.</i> .....	.....	65	.....	56	37
25. — <i>morrhua</i> , <i>L.</i> .....	.....	26	.....	.....	.....
26. <i>Merluccius merluccius</i> ( <i>L.</i> ) ..	.....	26	80	.....	.....
27. <i>Molva molva</i> ( <i>L.</i> ).....	.....	.....	.....	.....	.....
28. <i>Onus cimbricus</i> ( <i>L.</i> ) .....	30-90	46	70-100	56	37
29. — <i>maculatus</i> ( <i>Risso</i> ) .....	.....	65	40	.....	.....
30. <i>Hippoglossoides linandoides</i> ( <i>Bl.</i> ) .....	.....	40	45-100	.....	.....
31. — <i>platessoides</i> ( <i>Fabr.</i> ).....	30-60	26-46	80-100	.....	30
32. <i>Rhombus megastoma</i> ( <i>Donov.</i> )	.....	40	.....	.....	.....
33. — <i>norvegicus</i> , <i>Gthr.</i> .....	.....	45	.....	.....	.....
34. — <i>punctatus</i> ( <i>Bl.</i> ) .....	.....	.....	.....	60	.....
35. <i>Pleuronectes cynoglossus</i> , <i>L.</i> ...	.....	46-70	80-100	.....	.....

Loch Striven.	Dunoon Basin.	Loch Goil.	Upper Loch Long.	Gareloch.	General Distribution.
.....	.....	.....	.....	.....	"Seas of Europe, being common in the Mediterranean."
.....	.....	.....	.....	.....	Temperate seas of Northern and Southern hemispheres.
.....	.....	.....	.....	.....	Around the seas of Europe, Medit.
.....	.....	.....	.....	.....	Western Europe, rare in Medit., Madeira.
.....	30-40	.....	.....	.....	European coasts to Medit.; Madeira.
.....	30-40	.....	.....	.....	Rare north of 60° N., Medit. to Cape of Good Hope; Newfoundland to Cape Hatteras.
.....	.....	.....	.....	.....	Arctic regions in both hemispheres; Baltic, North Sea, France, Spain.
.....	.....	.....	.....	.....	Norway and Faeroes (new to Britain).
.....	15-30	.....	.....	.....	Arctic and N. Atlantic in both hemispheres; Baltic, North Sea.
.....	.....	.....	.....	.....	Baltic; West Europe from Norway to Medit.
.....	.....	.....	.....	.....	New species; an arctic genus.
.....	.....	.....	.....	.....	Iceland, Norway, Baltic, German Ocean.
.....	30-40	.....	.....	.....	Polar Regions to Cape Cod, and to Scandinavia, Denmark, Holland, France. ? Mediterranean.
.....	43	.....	.....	.....	Shetland, Medit.
40	20-43	45	.....	20	Scandinavia, Shetland, Channel, Medit.
.....	.....	.....	.....	.....	Norway, Denmark, German Ocean, very rare in Medit.
.....	.....	.....	.....	.....	Scandinavia, Denmark, Shetland, Medit. (new to Britain).
.....	.....	.....	.....	20	Greenland, Iceland, Shetland to France.
30-40	20	.....	40	20	Iceland, Scandinavia.
.....	30-40	40	.....	.....	Northern and Arctic Europe, Newfoundland to Cape Hatteras.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	.....	.....	.....	.....	Scandinavia, Faeroes (new to Britain).
.....	30-40	.....	.....	.....	Scandinavia to Medit.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	40	.....	.....	.....	Northern seas of Europe and America.
30-40	30-40	.....	40	20	Scandinavia to Madeira and Medit., Greenland to Cape Hatteras.
.....	30-40	.....	.....	.....	Spitzbergen to Medit.
30-40	20-40	.....	.....	.....	Coasts of Northern Europe.
.....	.....	.....	.....	.....	Coasts of Europe.
.....	40-42	.....	.....	.....	Coasts of Northern Europe.
30-40	20-40	40	40	20	North Atlantic.
.....	.....	.....	.....	.....	Northern seas to French coast.
.....	43	.....	.....	.....	Sweden and Norway.
.....	.....	.....	.....	.....	Northern Europe to France.
.....	30-40	.....	40	.....	North Sea to France, American coast.

	ARRAN BASIN.				Upper Loch Fyne.
	Brodick Basin.	Kil- brennan Basin.	Inch- marnoch Basin.	Cumbræ Basin.	
36. <i>Pleuronectes flesus</i> , <i>L.</i> .....	.....	.....	.....	.....	.....
37. — <i>limanda</i> , <i>L.</i> .....	.....	20	.....	.....	.....
38. — <i>microcephalus</i> , <i>Donov.</i> ...	50-60	.....	40-60	.....	.....
39. — <i>platessa</i> , <i>L.</i> .....	.....	26	.....	.....	.....
40. <i>Solea variegata</i> ( <i>Donov.</i> ) .....	.....	65	.....	.....	.....
41. <i>Argentina sphyæna</i> , <i>L.</i> .....	.....	.....	.....	.....	.....
42. <i>Conger vulgaris</i> , <i>Cuv.</i> .....	.....	.....	.....	56	.....
42 species.					
TUNICATA.					
43. <i>Cynthia echinata</i> , <i>Linn.</i> .....	?	?	80-104	.....	.....
44. <i>Styela grossularia</i> , <i>V. Ben.</i> .....	50-60	?	80-104	.....	70
45. — <i>rustica</i> , <i>Linn.</i> .....	.....	.....	80-100	.....	70
46. <i>Polycarpa pomaria</i> , <i>Sav.</i> .....	.....	.....	?	.....	.....
47. <i>Corella parallelogramma</i> , <i>O. F.</i> <i>Müll.</i> .....	?	?	?	.....	50
48. <i>Ciona intestinalis</i> , <i>Linn.</i> .....	?	?	?	.....	50
49. <i>Ascidia mentula</i> , <i>O. F. Müll.</i> ...	.....	?	45-49	.....	70
50. — <i>scabra</i> , <i>O. F. Müll.</i> .....	?	?	45-104	.....	.....
51. — <i>virginea</i> , <i>O. F. Müll.</i> .....	?	?	80-100	.....	.....
9 species.					
MOLLUSCA.					
52. <i>Eledone cirrosa</i> , <i>Lamk.</i> .....	.....	22	.....	.....	.....
53. <i>Sepiola Rondeleti</i> , <i>Leach</i> .....	.....	22-70	.....	.....	.....
54. <i>Rossia Oweni</i> , <i>Ball</i> .....	28-90	22-49	.....	.....	30-65
55. <i>Dendronotus arborescens</i> ( <i>Müll.</i> ) .....	.....	40-49	.....	.....	.....
56. <i>Scaphander lignarius</i> ( <i>L.</i> ) .....	.....	22	.....	.....	.....
57. <i>Pleurotoma</i> ( <i>Bela</i> ) <i>turricula</i> <i>(Mont.)</i> .....	.....	.....	45-49	50	.....
58. <i>Chrysodomus antiquus</i> ( <i>L.</i> ) ...	50-90	22-70	37-104	60-62	50
59. <i>Fusus</i> ( <i>Sipho</i> ) <i>gracilis</i> ( <i>Da C.</i> ) ...	22	22	100	60-62	50
60. <i>Buccinum undatum</i> , <i>L.</i> .....	.....	22-70	104 <i>d.</i>	.....	50-70
61. <i>Aporrhais pes-pelecani</i> ( <i>L.</i> ) .....	.....	22	37-49	60-62	.....
62. <i>Turritella terebra</i> ( <i>L.</i> ) .....	50-90	22	37-49	50	.....
63. <i>Rissoa abyssicola</i> , <i>Forbes</i> .....	.....	.....	100	.....	.....
64. <i>Velutina levigata</i> ( <i>Penn.</i> ) .....	.....	.....	104	.....	50
65. <i>Natica Alderi</i> , <i>Forbes</i> .....	.....	.....	80	.....	.....
66. — <i>Montagui</i> , <i>Forbes.</i> .....	60	.....	104	60-62	.....
67. — <i>sordida</i> , <i>Phil.</i> .....	90	22	37-104 <i>d.</i>	60-62	.....
68. <i>Trochus</i> ( <i>Gibbula</i> ) <i>cinerarius</i> , <i>L.</i> .....	.....	.....	45-49, 104 <i>d.</i>	50	30-75
69. — <i>magus</i> , <i>L.</i> .....	.....	.....	45-49 <i>d.</i>	.....	.....
70. — ( <i>Zizyphinus</i> ) <i>zizyphinus</i> , <i>L.</i> .....	.....	40-64	.....	.....	.....
71. — (—) <i>inilegranus</i> , <i>Phil.</i> ..	.....	40-49	104	.....	30-35 <i>d.</i>
72. <i>Emarginula crassa</i> , <i>Sow.</i> .....	.....	.....	104 <i>d.</i>	.....	.....

Loch Striven.	Dunoon Basin.	Loch G. oil.	Upper Loch Long.	Gare-loch.	General Distribution.
.....	.....	.....	.....	20	Iceland, Northern Europe to France.
.....	.....	.....	.....	.....	Iceland, Northern Europe to Bay of Biscay.
.....	40	.....	.....	20	Iceland to France; Kamtschatka.
.....	30-40	.....	30	.....	Iceland to France; rare in Medit.
.....	.....	.....	.....	.....	Britain to France and Medit.
37	32	.....	.....	.....	Norway to Medit.
.....	.....	.....	.....	.....	Europe, Medit., East Indies, Japan, Tasmania.
.....	.....	.....	.....	.....	[U.S.A. Greenland, Spitzbergen, to Britain;
.....	.....	.....	30	.....	Arctic to Belgium; U.S.A.(?)
.....	.....	.....	.....	.....	Arctic to Britain; U.S.A.
.....	40	35	.....	.....	Scandinavia to Medit.
.....	.....	35	.....	.....	Scandinavia to Britain.
.....	.....	.....	.....	.....	Arctic to Medit.; Australia.
.....	40	30-40	.....	.....	Greenland, Iceland, Scandinavia to Britain; U.S.A. ?; Medit.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	30-40	.....	.....	.....	Greenland to Scandinavia and Medit.;
40	30-40	35-40	.....	.....	W. Africa, Canaries.
.....	.....	.....	.....	.....	Scandinavia to Britain.
.....	.....	.....	.....	.....	Arctic.
40	42	.....	.....	.....	All European seas. 1-50 fms.
.....	.....	.....	.....	.....	Arctic and Boreal Europe and U.S.A. [3-100 fms.
.....	30-42	35-40	30	20	Arctic and Boreal to France.
30-44	30-40	35-40	30	.....	[5-30 fms. Boreal Europe to Bay of Biscay, and U.S.A. 5-80 fms.
30-40	30-42	30-40	30	20	Celtic and Boreal Europe, Greenland and U.S.A. Low water to 100 fms.
30-40	30-40	.....	.....	20	All European coasts, Medit.
.....	30-40	.....	.....	.....	[3-100 fms. Boreal and Celtic. 7-100 fms.
.....	.....	.....	.....	.....	Scandinavia to Medit. Deep-water.
.....	.....	35	.....	.....	Arctic and Boreal. Isle of Man.
.....	.....	.....	.....	.....	[Shallow water to 30 fms. Atlantic and Medit.
.....	30-42	.....	.....	.....	Celtic Region. 12-90 fms.
.....	.....	45	.....	.....	Medit. and Atlantic. 20-60 fms.
30-40	40	30-35	30	.....	Norway to Spain. Shallow water to [20 fms.
.....	.....	.....	.....	.....	Britain to Medit. 3-25 fms.
.....	.....	.....	.....	.....	Norway to Medit. Low water to 50 fms.
.....	30-40	.....	.....	.....	Norway to Medit. 15-100 fms.
.....	.....	.....	.....	.....	Norway. 20-25 fms.



	ARRAN BASIN.				Upper Loch Fyne.
	Brodick Basin.	Kil- brennan Basin.	Inch- marnoch Basin.	Cumbrae Basin.	
73. <i>Emarginula reticulata</i> , <i>Sow.</i> ...	.....	.....	104 <i>d.</i>	.....	.....
74. <i>Puncturella Noachina</i> ( <i>L.</i> ).....	.....	.....	104	.....	50
75. <i>Tectura fulva</i> ( <i>Müll.</i> ) .....	.....	.....	.....	.....	.....
76. <i>Chiton marginatus</i> , <i>Penn.</i> .....	.....	.....	104	.....	50
77. <i>Dentalium entalis</i> , <i>L.</i> .....	90	.....	37-104	.....	70-75
78. <i>Anomia ephippium</i> , <i>L.</i> .....	22-50	.....	37	.....	.....
79. — <i>patelliformis</i> , <i>L.</i> .....	.....	40-49	.....	.....	75
80. <i>Lima elliptica</i> , <i>Jeffr.</i> .....	50-90	.....	80	.....	.....
81. <i>Pecten maximus</i> ( <i>L.</i> ) .....	.....	.....	45-49	.....	.....
82. — <i>opercularis</i> ( <i>L.</i> ) .....	22	22-64	37-49	60-62	30-75
83. — <i>pusio</i> ( <i>L.</i> ).....	50-60 <i>d.</i>	65	.....	.....	70
84. — <i>septemradiatus</i> , <i>Müll.</i> ...	50-90	22-70	37-104	60-62	30-80
85. — <i>striatus</i> , <i>Müll.</i> .....	80-90	.....	37	60-62	.....
86. — <i>tigrinus</i> , <i>Müll.</i> .....	.....	.....	45-49	.....	.....
87. <i>Modiola modiolus</i> ( <i>L.</i> ).....	.....	40-49	.....	.....	.....
88. — <i>barbata</i> ( <i>L.</i> ).....	.....	.....	.....	.....	70-75
89. <i>Modiolaria marmorata</i> ( <i>Forbes</i> )*	.....	.....	.....	.....	.....
90. <i>Nucula nitida</i> , <i>Sow.</i> .....	50-60	40	45-104	50	.....
91. — <i>nucleus</i> ( <i>L.</i> ).....	50-60	.....	.....	.....	.....
92. — <i>sulcata</i> , <i>Bronn</i> .....	80-90	22-70	37-104	50	.....
93. — <i>tenuis</i> ( <i>Mont.</i> ) .....	.....	.....	80-104	.....	.....
94. <i>Leda minuta</i> ( <i>Müll.</i> ) .....	.....	22	45-104	.....	.....
— —, <i>f. brevisrostris</i> , <i>Jeffr.</i> .....	.....	.....	.....	.....	.....
95. <i>Astarte compressa</i> ( <i>Mont.</i> ) .....	.....	.....	.....	.....	36
96. — <i>elliptica</i> , <i>Brown</i> .....	50-60	.....	37	.....	.....
97. — <i>sulcata</i> ( <i>DaC.</i> ).....	50-60 <i>d.</i>	70	104	.....	50
98. <i>Cardium aculeatum</i> , <i>L.</i> .....	.....	22	.....	.....	.....
99. — <i>echinatum</i> , <i>L.</i> .....	.....	.....	37	.....	.....
100. — <i>fasciatum</i> , <i>Mont.</i> .....	.....	.....	.....	60-62	.....
101. — <i>minimum</i> , <i>Phil.</i> .....	.....	.....	104	.....	.....
102. <i>Cyprina islandica</i> ( <i>L.</i> ).....	.....	65	37	.....	.....
103. <i>Isocardia cor</i> ( <i>L.</i> ).....	50-60	.....	.....	.....	.....
104. <i>Dosinia exoleta</i> ( <i>L.</i> ).....	.....	.....	45-49 <i>d.</i>	.....	.....
105. — <i>lineta</i> ( <i>Pult.</i> ) .....	.....	.....	37, 45-49 <i>d.</i>	.....	.....
106. <i>Venus fasciata</i> ( <i>DaC.</i> ) .....	.....	40-49	37	.....	.....
107. — <i>ovata</i> , <i>Penn.</i> .....	50-60	.....	37-49	.....	.....
108. <i>Cryptodon ferruginosus</i> ( <i>Forbes</i> )	70	.....	.....	.....	.....
109. — <i>flexuosus</i> ( <i>Mont.</i> ).....	.....	.....	.....	.....	.....
110. — <i>croilinensis</i> ( <i>Jeffr.</i> ).....	70	.....	.....	.....	.....
111. <i>Solen pellucidus</i> , <i>Penn.</i> .....	.....	.....	.....	.....	.....
112. <i>Maetra elliptica</i> , <i>Brown</i> .....	.....	.....	45-104	.....	.....

\* This form is, of course, only found along with the Ascidian on which it is parasitic.

Loch Striven.	Dunoon Basin.	Loch Goil.	Upper Loch Long.	Gareloch.	General Distribution.
.....	.....	.....	.....	.....	All West Europe, Medit. 12-90 fms.
.....	.....	.....	.....	.....	Greenland, North Atlantic, U.S.A., and Japan. 20-100 fms.
.....	20-30	.....	.....	.....	Norway. 20-80 fms.
.....	.....	.....	.....	.....	Scandinavia, U.S.A., Vigo Bay. [Shallow.
.....	.....	35	.....	.....	Norway to Spain. 40-70 fms.
.....	42	.....	.....	.....	All European seas. Low water to [30 fms.
.....	.....	.....	.....	.....	Northern Europe to Medit. 45-50fms.
.....	.....	45	.....	.....	All European coasts. 15-20 fms.
.....	.....	.....	.....	.....	Norway to Gibraltar and Medit. [3-40 fms.
40	30-40	.....	.....	.....	All European seas. 5-100 fms.
.....	.....	.....	.....	.....	All European seas. Low water to [90 fms.
30-40	30-40	35-45	.....	.....	Scandinavia, Medit. 20-100 fms.
.....	.....	.....	30	.....	Boreal, very rare in Medit. 12-60 fms.
.....	.....	.....	.....	.....	Atlantic and N. European seas. [12-60 fms.
.....	.....	.....	.....	.....	N. Atlantic. Low water to 70 fms.
.....	.....	.....	.....	.....	Lusitanian Region, Medit. 3-10 fms.
.....	.....	.....	.....	.....	All European seas. Parasitic on <i>Ascidia mentula</i> . Low water to 40 fms.
30-40	30-42	35	30	20	Sweden, Lusitania, Medit. Shallow [water to 34 fms.
.....	.....	.....	.....	.....	All European seas. Common. [7-90 fms.
30-40	30-42	45	.....	.....	Scandinavia to Medit. (deep). [30-100 fms.
.....	30-40	.....	.....	.....	Northern Europe, and U.S.A. [40-100 fms.
.....	.....	35-45	.....	.....	Arctic and Scandinavia. 10-100 fms.
.....	40	.....	.....	.....	Norway. 7-70 fms.
.....	.....	.....	.....	.....	Greenland, Norway. 10-45 fms.
.....	.....	.....	.....	.....	All European seas. 8-80 fms.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	.....	.....	.....	.....	Scandinavia to N. Atlantic. 7-80 fms.
.....	.....	.....	.....	.....	Atlantic.
.....	.....	.....	.....	.....	Arctic and Norway. 30-70 fms.
.....	.....	.....	.....	.....	Northern Europe. 5-80 fms.
.....	.....	.....	.....	.....	Scandinavia to Medit. 15-40 fms.
.....	.....	.....	.....	.....	All European seas. [Low water to 80 fms.
.....	.....	.....	.....	.....	All European seas. [Low water to 60 fms.
.....	.....	.....	.....	.....	Norway to Medit. 4-60 fms.
.....	.....	.....	.....	.....	Norway to Medit. 3-100 fms.
.....	.....	25	.....	.....	Arctic to Medit. 20-100 fms.
.....	.....	40	.....	.....	Arctic to Medit. 3-80 fms.
.....	.....	.....	.....	.....	Arctic, Atlantic, and Medit.
.....	.....	.....	.....	20	Throughout European seas. 6-100 fms.
.....	.....	.....	.....	.....	Arctic and N. Atlantic. [Low water to 50 fms.

	ARRAN BASIN.				Upper Loch Fyne.
	Brodick Basin.	Kil- brennan Basin.	Inch- marnoch Basin.	Cumbrac Basin.	
113. <i>Mya truncata</i> , <i>L.</i> .....	.....	.....	.....	.. ...	50 <i>d.</i>
114. <i>Corbula gibba</i> , <i>Olivi</i> .....	50-60	22	.....	50	36
115. <i>Saxicava rugosa</i> ( <i>L.</i> ) .....	50	.....	.....	.....	.....
116. <i>Tellina sordida</i> .....	.....	.....	45-49	.....	.....
117. <i>Semele</i> ( <i>Abra</i> ) <i>alba</i> ( <i>Wood</i> ).....	90	.....	37-80	50	36-50
118. ——— <i>nitida</i> , <i>Müll.</i> .....	.....	.....	80	.....	.....
119. ——— <i>tenuis</i> ( <i>Mont.</i> ) .....	.....	.....	.....	.....	.....
120. <i>Cuspidaria abbreviata</i> , <i>Forbes</i> ...	.....	.....	30	.....	.....
121. ——— <i>cuspidata</i> ( <i>Olivi</i> ).....	.....	.....	.....	.....	.....
70 species.					
BRACHIOPODA.					
122. <i>Terebratulina caput-serpentis</i> ( <i>L.</i> ) 1 species.	.....	.....	80-104	.....	50
POLYZOA.					
123. <i>Scrupocellaria reptans</i> ( <i>L.</i> ).....	.....	64	.....	.....	.....
124. <i>Bugula turbinata</i> , <i>Alder</i> .....	.....	30-50	.....	.....	.....
125. <i>Cellaria fistulosa</i> ( <i>L.</i> ) .....	.....	25-64	.....	.....	.....
126. <i>Flustra foliacea</i> ( <i>L.</i> ) .....	.....	25-49	.....	.....	.....
127. ——— <i>securifrons</i> ( <i>Pallas</i> ) .....	.....	65	.....	.....	.....
128. <i>Membranipora catenularia</i> ( <i>Jameson</i> ) .....	.....	50	.....	.....	.....
129. ——— <i>Flemingi</i> , <i>Busk</i> .....	.....	65	.....	.....	.....
130. ——— <i>pilosa</i> ( <i>L.</i> ) .....	.....	50	104	.....	.....
131. <i>Microporella ciliata</i> ( <i>Pall.</i> ).....	.....	50	.....	.....	.....
132. ——— <i>impressa</i> ( <i>Aud.</i> ) .....	.....	50	.....	.....	.....
133. <i>Schizoporella unicornis</i> ( <i>Johnst.</i> ) .....	.....	25	.....	.....	.....
134. <i>Hippothoa carinata</i> , <i>Norman</i> ...	.....	50	.....	.....	.....
135. <i>Porella compressa</i> ( <i>Sow.</i> ) .....	.....	25	.....	.....	.....
136. <i>Smittia reticulata</i> ( <i>Mac Gill.</i> )...	.....	25	.....	.....	.....
137. <i>Mucronella Peachii</i> ( <i>Johnst.</i> )...	.....	25-64	.....	.....	.....
138. ——— <i>ventricosa</i> ( <i>Hass.</i> ) .....	.....	50	.....	.....	.....
139. <i>Cellepora avicularis</i> , <i>Hincks</i> ...	.....	50-65	.....	.....	.....
140. ——— <i>pumicosa</i> , <i>L.</i> .....	.....	50	.....	.....	.....
141. ——— <i>ramulosa</i> , <i>L.</i> .....	.....	25-64	.....	.....	.....



	ARRAN BASIN.				Upper Loch Fyne.
	Brodick Basin.	Kilbrennan Basin.	Inchmarnoch Basin.	Cumbræ Basin.	
142. <i>Crisia denticulata</i> ( <i>Lamk.</i> ) .....	.....	64	.....	.....	.....
143. — <i>eburnea</i> ( <i>L.</i> ), <i>var. aculeata</i> .....	.....	50	.....	.....	.....
— —, <i>var. producta</i> .....	.....	25	.....	.....	.....
144. <i>Stomatopora granulata</i> ( <i>M.-Edw.</i> ) .....	.....	65	.....	.....	.....
145. <i>Idmonea serpens</i> ( <i>L.</i> ) .....	.....	65	.....	.....	.....
146. <i>Diastopora obelia</i> , <i>Johnst.</i> .....	.....	50-64	.....	.....	.....
147. <i>Lichenopora hispida</i> ( <i>Flem.</i> ) ... ..	.....	25-64	.....	.....	.....
— —, <i>var. mæandrina</i> , <i>Peack</i> .....	.....	65	.....	.....	.....
148. — <i>verrucaria</i> ( <i>O. Fabr.</i> ) .....	.....	50	.....	.....	.....
149. <i>Mucronella ventricosa</i> .....	.....	50	.....	.....	.....
150. <i>Vesicularia spinosa</i> ( <i>L.</i> ) .....	.....	50	.....	.....	.....
151. <i>Cylindrocium dilatatum</i> , <i>Hincks.</i> 29 species.	.....	65	.....	.....	.....
CRUSTACEA.					
152. <i>Inachus dorsettensis</i> , <i>Penn.</i> ... ..	.....	.....	37-104	50-60	50
153. — <i>dorynchus</i> , <i>Leach</i> .....	.....	25	.....	.....	.....
154. <i>Hyas araneus</i> , <i>L.</i> .....	.....	.....	.....	.....	50
155. — <i>coarctatus</i> , <i>Leach</i> .....	60	49-65	45-49	60	75-80
156. <i>Stenorhynchus longirostris</i> , <i>M.-Edw.</i> .....	.....	40-49	37	50	.....
157. — <i>rostratus</i> , <i>L.</i> .....	.....	40-64	.....	.....	.....
158. <i>Eurynome aspera</i> , <i>Penn.</i> .....	.....	.....	.....	50	.....
159. <i>Portunus depurator</i> , <i>L.</i> .....	80-90	?	104	50-60	.....
160. — <i>holsatus</i> , <i>Fabr.</i> .....	.....	.....	45-49	.....	.....
161. — <i>marmoreus</i> , <i>Leach</i> .....	.....	.....	.....	.....	.....
162. — <i>pusillus</i> , <i>Leach</i> .....	.....	.....	104	.....	.....
163. <i>Ebalia tuberosa</i> , <i>Penn.</i> .....	.....	.....	.....	50	.....
164. <i>Lithodes maia</i> ( <i>L.</i> ) .....	.....	?	37-49	.....	70
165. <i>Eupagurus bernhardus</i> ( <i>L.</i> ) ..	.....	20-49, 80	37-104	50-60	35-70
166. — <i>Prideauxii</i> ( <i>Leach</i> ) .....	.....	50	.....	50-60	.....
167. — <i>pubescens</i> ( <i>Krøyer</i> ).....	.....	20-65	.....	60	.....
168. — <i>excavatus</i> , <i>Miers</i> .....	.....	.....	45-49	.....	.....
169. <i>Anapagurus lævis</i> ( <i>Thompson</i> ) ..	.....	?	37-104	60	.....
170. <i>Galathea dispersa</i> , <i>Sp. Bate</i> ..	50-90	.....	.....	.....	.....
171. — <i>nexa</i> , <i>Embleton</i> .....	50-60	.....	.....	.....	.....
172. — <i>squamifera</i> , <i>Leach</i> .....	.....	49	.....	.....	80
173. <i>Munida rugosa</i> ( <i>Fabr.</i> ) .....	80-90	70	.....	.....	.....
174. <i>Calocaris Macandrea</i> , <i>Bell</i> .....	50-90	.....	80-104	50	.....
175. <i>Nephrops norvegicus</i> ( <i>L.</i> ) .....	80-90	40	37	.....	.....
176. <i>Crangon Allmani</i> , <i>Kinahan</i> ...	25-90	20-70	37-80, 105	40-62	50-75
177. — <i>echinulatus</i> , <i>M. Sars</i> .....	.....	.....	104	.....	.....
178. — <i>spinus</i> , <i>Leach</i> .....	.....	.....	45-49	.....	.....
179. <i>Nika edulis</i> , <i>Risso</i> .....	93	.....	104	.....	.....
180. <i>Hippolyte Gaimardi</i> , <i>M.-Edw.</i> ..	.....	.....	45-104	.....	50-75
181. — <i>pusiola</i> , <i>Krøyer</i> .....	.....	.....	.....	.....	.....
182. — <i>securifrons</i> , <i>Norman</i> .....	50-90	50-60	37-80	60-70	35-80
183. — <i>spinus</i> , <i>Sowb.</i> .....	.....	65	.....	.....	.....

Loch Striven.	Dunoon Basin.	Loch Goil.	Upper Loch Long.	Gareloch.	General Distribution.
.....	.....	.....	.....	.....	Arctic to Medit., U.S.A., Madeira, S. Africa. [10-100 fms.
.....	.....	.....	.....	.....	All British shores. 4-96 fms.
.....	.....	.....	.....	.....	Nova Zembla, Scandinavia.
.....	.....	.....	.....	.....	Norway to N. France.
.....	.....	.....	.....	.....	[Low water to 170 fms.
.....	.....	.....	.....	.....	Norway to Medit.
.....	.....	.....	.....	.....	[2 fms. to "deep water."
.....	.....	.....	.....	.....	Arctic and Norway to Medit., U.S.A.
.....	.....	.....	.....	.....	[2-20 fms.
.....	.....	.....	.....	.....	Greenland and Norway to S.W. France.
.....	.....	.....	.....	.....	To 170 fms.
.....	.....	.....	.....	.....	Shetland. 80-100 fms.
.....	.....	.....	.....	.....	Arctic, Norway, U.S.A. 10-150 fms.
.....	.....	.....	.....	.....	Arctic, Scandinavia, to Medit., New Zealand.
.....	.....	.....	.....	.....	Norway to N. France.
.....	.....	.....	.....	.....	Belgium to Medit. 8-? fms.
.....	30-40	.....	.....	.....	Norway, Medit., Atlantic.
.....	.....	.....	.....	.....	Norway, Medit., Atlantic.
.....	30-40	.....	.....	.....	Norway, Labrador, U.S.A.
.....	30-42	.....	30	20	Norway, Labrador, Arctic, U.S.A.
.....	.....	.....	.....	.....	Medit., Atlantic.
.....	.....	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Norway, Medit. 25-35 fms.
.....	30-42	30	30	20	Norway, Medit.
.....	.....	.....	.....	.....	Norway, Medit.
.....	.....	.....	.....	20	N. Atlantic to Medit.
.....	.....	.....	.....	.....	Norway, Medit., Canaries.
.....	.....	.....	.....	.....	Norway, Medit.
.....	.....	40-45	30	.....	Norway, U.S.A. Shallow.
40	30-42	30-40	30	20	Norway, Medit., U.S.A.
.....	30-40	.....	.....	.....	Norway, Medit., Cape Verde.
.....	.....	.....	.....	.....	Norway, Labrador, Arctic, U.S.A.
.....	.....	.....	.....	.....	Medit., Atlantic, Senegambia.
.....	.....	.....	.....	.....	Norway, Medit.
.....	.....	.....	.....	.....	Norway.
.....	20-40	.....	.....	.....	Norway, Medit.
.....	.....	.....	.....	.....	Norway, Medit.
40	30-40	30-40	.....	.....	Norway, Medit.
.....	40	.....	.....	.....	Norway, Medit., U.S.A.
40	30-42	45	.....	20	Norway, Medit.
40	30-42	30-45	30	20	Norway.
.....	.....	.....	.....	.....	Norway.
.....	42	.....	.....	.....	Norway, Medit.
.....	.....	.....	.....	.....	Norway, Medit.
40	30-42	30-35	30	20	Norway, Labrador, Arctic, U.S.A.
.....	.....	20-35	20-35	.....	Norway, U.S.A.
40	30-42	30-45	.....	20	Norway, U.S.A.
.....	.....	.....	.....	.....	Norway, Labrador, Arctic, U.S.A.

	ARRAN BASIN.				Upper Loch Fyne.
	Brodick Basin.	Kil- brennan Basin.	Inch- marnoch Basin.	Cumbræ Basin.	
184. Caridion Gordoni ( <i>Sp. Bate</i> ) ...	.....	50-60	.....	.....	.....
185. Pandalus annulicornis, <i>Leach</i> ...	45-90	20-70	45-100	46-70	60-70
186. — brevisrostris, <i>Rathke</i> .....	.....	.....	37	.....	.....
187. Pasiphaea sivado ( <i>Risso</i> ) .....	50-90	49	104	.....	.....
188. Nyctiphanes norvegica ( <i>M. Sars</i> )	50-90	.....	80-100	.....	60-75
189. Boreophausia inermis ( <i>Krøyer</i> )?	.....	.....	.....	.....	.....
190. — Raschi ( <i>M. Sars</i> ) .....	.....	.....	.....	60	.....
191. Mysidopsis didelphys ( <i>Norman</i> )	.....	.....	.....	.....	.....
192. Mysis neglecta, <i>G. O. Sars</i> .....	.....	.....	60	.....	.....
193. Cirolana hirtipes, <i>M.-Edw.</i> .....	.....	.....	37-80	29	.....
194. Conilera cylindracea ( <i>Mont.</i> ) ...	.....	.....	.....	50	.....
195. Munna whiteana, <i>Sp. B. &amp; W.</i> ..	.....	.....	.....	35-40	.....
196. Janira maculosa, <i>Leach</i> .....	.....	.....	40-60	.....	.....
197. Arcturus longicornis ( <i>Sowb.</i> ) ...	.....	49	105	20	.....
198. Idotea parallela, <i>Sp. B. &amp; W.</i> ...	.....	.....	.....	50	.....
199. Hippomedon Holbölli ( <i>Krøyer</i> )	.....	.....	80	.....	.....
200. Tryphosa longipes ( <i>Sp. Bate</i> )...	.....	.....	.....	66	.....
201. Callisoma crenatum ( <i>Sp. Bate</i> )	.....	.....	80	30	.....
202. Bathyporeia pilosa ( <i>Lindstr.</i> ) ...	20	.....	.....	.....	.....
203. Lysianax tumida ( <i>Krøyer</i> ) .....	.....	.....	40-60	.....	.....
204. Leucothoë spiniarpa ( <i>Abild.</i> )...	.....	.....	92	.....	.....
205. Stenothoë monoculoides ( <i>Mont.</i> )	.....	.....	.....	40?	.....
206. Harpinia plumosa ( <i>Krøyer</i> ) ...	.....	.....	80	.....	.....
207. Westwoodilla cæcula, <i>Sp. Bate</i>	.....	20	.....	.....	.....
208. Monoculodes Stimpsoni, <i>Sp.</i> <i>Bate.</i>	.....	.....	105	.....	.....
209. — longimanus, <i>Sp. B. &amp; W.</i> ..	20	.....	.....	.....	.....
210. Epimeria cornigera ( <i>J. C. Fabr.</i> )	80	.....	80-100	60	25
211. Cheirocratus Sundevalli ( <i>Rath.</i> )	.....	.....	.....	25	.....
212. — assimilis ( <i>Lilljeb.</i> ) .....	.....	.....	104	.....	.....
213. Gammarus locusta ( <i>L.</i> ) .....	.....	.....	.....	35	.....
214. Mæra Loveni ( <i>Bruz.</i> ) .....	80	.....	.....	55-60	.....
215. — longimana ( <i>Leach</i> ) .....	.....	.....	90	.....	.....
216. Amathilla homari ( <i>Fabr.</i> ) .....	.....	65	.....	.....	.....
217. Ampelisca macrocephala, <i>Lillj.</i>	80	.....	.....	.....	.....
218. — tenuicornis, <i>Lillj.</i> .....	.....	.....	80	35	.....
219. Haploops tubicola, <i>Lillj.</i> .....	.....	.....	.....	60	.....
220. — setosa, <i>Boeck</i> .....	.....	.....	100	.....	.....
221. Podocerospis Sophia, <i>Boeck</i> ...	.....	.....	.....	.....	.....
222. — undata, <i>Sp. Bate</i> .....	25	.....	.....	.....	.....
223. Cerapus abditus, <i>Templet.</i> .....	.....	.....	80	.....	.....
224. Evadne Nordmanni, <i>Lov.</i> .....	.....	.....	.....	.....	60-70
225. Calanus finmarchicus, <i>Gunner</i> .	50-70	20-40	24-84	50	30-75
226. Euchæta norvegica, <i>Boeck</i> .....	.....	.....	.....	.....	64-75
227. Pseudocalanus elongatus, <i>Boeck</i>	70	20-40	24-84	50	35-75
228. Temora longicornis, <i>Müll.</i> .....	.....	20-40	24-84	.....	35
229. Centropages hamatus, <i>Lillj.</i> ...	70	20-40	24-84	50	35-70
230. Dias longiremis, <i>Lillj.</i> .....	70	40	20-80	50	30-70
231. Oithona spinifrons, <i>Boeck</i> .....	50-70	20-40	24-84	50	30-35
232. Ectinosoma atlanticum ( <i>Br. &amp;</i> <i>Rob.</i> ).	.....	.....	24	.....	.....
233. Scalpellum vulgare, <i>Leach</i> .....	.....	40	.....	.....	.....
234. Balanus hameri ( <i>Asc.</i> ).....	.....	.....	104 <i>d.</i>	.....	.....

Loch Striven.	Dunoon Basin.	Loch Goil.	Upper Loch Long.	Gareloch.	General Distribution.
.....	42	.....	.....	.....	Norway, U.S.A.
40	30-40	30-45	30	20	Norway.
40	.....	.....	.....	20	Norway, Arctic, Medit.
40	30-40	30-35	.....	.....	Norway, Medit.
.....	.....	.....	30	.....	Norway, U.S.A.
40	40-45	.....	30	.....	Norway, U.S.A.
.....	43	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Medit.
.....	.....	.....	.....	.....	Firth of Clyde to S. of Britain.
.....	.....	.....	.....	.....	Firth of Clyde to S. of Britain.
.....	39	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Medit.
.....	.....	.....	.....	.....	Norway, Medit.
.....	.....	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Norway to Medit.*
.....	.....	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Moray Firth, Plymouth.
.....	.....	.....	.....	.....	Plymouth.
.....	20	.....	.....	.....	S. Norway to S.W. France.
.....	39	.....	.....	.....	Norway, Arctic, Medit.
.....	.....	.....	.....	.....	Norway to France.
.....	.....	.....	.....	.....	Norway to France.
.....	.....	.....	.....	.....	Norway, Labrador, Arctic, Medit.
.....	.....	.....	.....	.....	Greenland, Spitzbergen to Denmark.
.....	.....	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Norway, Arctic.
.....	.....	.....	.....	.....	Norway, Labrador.
.....	.....	.....	.....	.....	Norway.
35	20-25	.....	.....	.....	Norway, Arctic.
.....	.....	.....	.....	.....	Norway, Arctic, U.S.A.
.....	39	.....	.....	.....	Norway.
.....	.....	.....	.....	.....	Northumberland.
.....	.....	.....	.....	.....	Medit., Atlantic.
.....	.....	.....	.....	.....	North Sea, Medit.
35	20-42	35	40	20	Arctic, Norway, N. Atlantic, Southern Seas, Medit.
.....	.....	.....	.....	.....	Scandinavia.
35	20-42	35	40	20	Scandinavia.
.....	20-42	.....	40	20	Norway.
.....	20-42	.....	40	.....	North Sea, Medit.
35	20-42	35	40	20	Norway, North Sea, Medit.
35	20-42	.....	50	20	Norway.
35	40	.....	.....	.....	N. Atlantic.
.....	.....	.....	.....	.....	European seas, Medit.
.....	.....	.....	.....	.....	Iceland, Norway, Faeroes, U.S.A.

\* Carus (Prodr. faun. Medit. p. 409) states that this is confined to the Mediterranean.



	ARRAN BASIN.				Upper Loch Fyne.
	Brodick Basin.	Kil- brennan Basin.	Inch- marnoch Basin.	Cumbræe Basin.	
VERMES.					
235. <i>Pontobdella muricata</i> , <i>L.</i> .....	.....	.....	.....	.....	.....
236. <i>Aphrodite aculeata</i> , <i>L.</i> .....	.....	.....	37-104	.....	65-75
237. <i>Hyalinœcia tubicola</i> ( <i>O. F. Müll.</i> ) .....	.....	.....	.....	.....	.....
238. <i>Eumenia Jeffreyssi</i> , <i>M'I.</i> .....	80-90	40	104	.....	65-75
239. <i>Pectinaria belgica</i> ( <i>Pall.</i> ) .....	80-90	.....	37	.....	.....
240. <i>Sabella pavonia</i> ( <i>Sav.</i> ) .....	90	.....	.....	.....	.....
241. <i>Filigrana implexa</i> ( <i>Berk.</i> ) .....	80-90	22-70	37	.....	50
242. <i>Serpula vermicularis</i> ( <i>L.</i> ) .....	.....	.....	.....	.....	50
243. <i>Leptoplana tremellaris</i> .....	.....	.....	80	.....	.....
9 species.					
ECHINODERMATA.					
244. <i>Cucumaria Hyndmanni</i> .....	.....	75-80	.....	.....	.....
( <i>Thomps.</i> )					
245. <i>Psolus phantapus</i> ( <i>Strussenf.</i> ) .....	.....	.....	40	.....	.....
246. <i>Thyone fusus</i> ( <i>O. F. Müll.</i> ) .....	.....	75-80	.....	.....	.....
247. <i>Holothuria intestinalis</i> , <i>Asc. &amp; Rath.</i> .....	.....	50	.....	.....	.....
248. <i>Echinus esculentus</i> , <i>L.</i> .....	.....	.....	37-80	.....	30-80
249. — <i>miliaris</i> , <i>P. L. S. Müll.</i> .....	.....	.....	.....	.....	.....
250. <i>Brissopsis lyrifera</i> ( <i>Forbes</i> ) .....	50-90	{ 22-40, 75-80	37-104	50	.....
251. <i>Spatangus purpureus</i> , <i>O.F.Müll.</i> .....	.....	.....	.....	50	36
252. <i>Echinocardium flavescens</i> , <i>O. F. Müll.</i> .....	.....	.....	.....	.....	.....
253. <i>Porania pulvillus</i> ( <i>O. F. Müll.</i> ) .....	.....	22-45	37	.....	.....
254. <i>Stichaster roseus</i> ( <i>O. F. Müll.</i> ) .....	.....	22	.....	20-30	.....
255. <i>Crossaster papposus</i> ( <i>Linck</i> ) .....	.....	22	.....	.....	.....
256. <i>Solaster endeca</i> ( <i>Gm.</i> ) .....	.....	.....	.....	.....	.....
257. <i>Cribrella oculata</i> ( <i>Linck</i> ) .....	.....	.....	80	.....	.....
258. <i>Asterias rubens</i> , <i>L.</i> .....	.....	22-40	40-80	.....	.....
259. — <i>violacea</i> , <i>O. F. Müll.</i> .....	.....	22	.....	.....	.....
260. <i>Ophioglypha affinis</i> ( <i>Ltk.</i> ) .....	.....	75-80	104	.....	.....
261. — <i>albida</i> ( <i>Forbes</i> ) .....	.....	.....	.....	.....	50-75
262. — <i>lacertosa</i> ( <i>Penn.</i> ) .....	.....	.....	80	.....	50
263. <i>Ophiopholis aculeata</i> ( <i>O.F.Müll.</i> ) .....	.....	.....	37-104	.....	50
264. <i>Amphiura Chiajei</i> , <i>Forbes</i> .....	50-90	{ 22-40, 75-80	25, 37-104	20-60	36-50
265. — <i>filiformis</i> ( <i>O. F. Müll.</i> ) .....	50-60	75-80	100	35-60	36
266. <i>Ophiocoma nigra</i> ( <i>O. F. Müll.</i> ) .....	.....	.....	.....	.....	.....
267. <i>Ophiothrix pentaphyllum</i> .....	.....	.....	37	50	50-75
( <i>Penn.</i> )					
268. <i>Antedon rosacea</i> ( <i>Linck</i> ) .....	.....	.....	.....	.....	.....
25 species.					

Loch Striven.	Dunoon Basin.	Loch Goil.	Upper Loch Long.	Gare-loch.	General Distribution.
.....	40	.....	.....	.....	North Sea, Medit.
.....	40	35-40	30	20	Scandinavia to Medit., U.S.A.
.....	.....	35-40	.....	.....	Scandinavia to Medit., Madeira. [30-80 fms.
40	40	35-40	.....	.....	British seas.
.....	40	.....	.....	.....	Scandinavia to Britain.
.....	.....	35-40	.....	.....	Scandinavia, Britain. 20-100 fms.
.....	.....	.....	.....	.....	Scandinavia to Medit. 20-300 fms.
.....	.....	35	.....	.....	Scandinavia to France. 15-80 fms.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	.....	.....	.....	.....	Arctic, Scandinavia, U.S.A.
.....	.....	.....	.....	.....	Scandinavia to Medit.
.....	.....	.....	.....	.....	Arctic, Scandinavia.
40	30-40	30	30	20	Norway to English Channel.
.....	.....	45	.....	.....	Norway to English Channel.
.....	30-42	.....	.....	.....	Greenland and Norway to Medit., W. Indies, Florida, Cape of Good Hope. 0-2435 fms.
.....	40	.....	.....	.....	Norway to Medit., Azores, Bermuda, W. Indies. 0-45 fms.
30-40	35	.....	.....	.....	Norway to France, Cape of Good Hope, Carolina to Florida. [0-150 fms.
.....	.....	.....	.....	.....	Scandinavia. 15-106 fms.
.....	.....	.....	.....	.....	Scandinavia. 2-50 fms.
.....	30-40	.....	.....	.....	Arctic and Norway to France, U.S.A. [0-640 fms.
.....	30-40	.....	.....	.....	Arctic and Norway to France, U.S.A. [0-150 fms.
.....	30-42	35	30	20	Arctic to Britain, U.S.A. 0-1350 fms.
.....	30-40	45	.....	.....	Only British. 0-53 fms.
.....	.....	.....	.....	.....	Norway to Britain. 65 fms.
.....	.....	.....	.....	.....	Scandinavia to Medit., U.S.A. [To 192 fms.
.....	.....	35	.....	.....	Scandinavia and Færoes to Azores, Medit. 5-458 fms.
.....	.....	.....	30	20	Arctic North Atlantic, Medit., Madeira.
.....	30-40	.....	30	.....	Arctic and Scandinavia. To 560 fms.
40	40	35	.....	.....	Scandinavia to Medit. To 555 fms.
.....	39	.....	.....	.....	Scandinavia to Medit. To 555 fms.
40	.....	.....	30	.....	Arctic and Scandinavia. 7-87 fms.
40	30-40	.....	30	.....	France. 83 fms.
.....	30-40	.....	.....	.....	Hebrides to Madeira and Medit. [100 fms.

	ARRAN BASIN.				Upper Loch Fyne.
	Brodick Basin.	Kil- brennan Basin.	Inch- marnoch Basin.	Cumbrae Basin.	
CELEENTERATA.					
269. <i>Hydractinia echinata</i> (Flem.) ...	.....	54	37-104	.....	50
270. <i>Perigonimus repens</i> (Wright) ...	.....	50	.....	.....	.....
271. <i>Dicoryne conferta</i> (Alder) .....	.....	.....	.....	.....	.....
272. <i>Tubularia indivisa</i> , L. ....	.....	65	.....	50	.....
273. <i>Campanularia angulata</i> , Hincks. ....	.....	50-64	.....	.....	.....
274. — <i>volubilis</i> (L.) .....	.....	50-60	.....	.....	.....
275. <i>Lafoëa dumosa</i> (Flem.) .....	.....	49-64	.....	.....	.....
276. — <i>fruticosa</i> (Sars) .....	.....	64	104	.....	.....
277. <i>Calycella fastigiata</i> (Alder) ...	.....	49	.....	.....	.....
278. <i>Halecium Beanii</i> , Johnst. ....	.....	80	.....	.....	.....
279. — <i>halecinum</i> (L.) .....	.....	.....	104	.....	.....
280. — <i>muricatum</i> (Ell. & Sol.)...	.....	49	.....	.....	.....
281. <i>Sertularella fusiformis</i> , Hincks. ....	.....	.....	104	.....	.....
282. — <i>Gayi</i> (Lamx.) .....	.....	30-50	.....	.....	.....
283. — <i>rugosa</i> (L.) .....	.....	64	.....	.....	.....
284. <i>Diphasia attenuata</i> , Hincks ...	.....	30-64	.....	.....	.....
285. — <i>fallax</i> (Johnst.) .....	.....	64	.....	.....	.....
286. — <i>tamarisca</i> (L.) .....	.....	64	.....	.....	.....
287. — <i>pinaster</i> (Ell. & Sol.) .....	.....	64	.....	.....	.....
288. <i>Sertularia abietina</i> , L. ....	.....	25	.....	.....	.....
289. — <i>argentea</i> , Ell. & Sol. ....	.....	25-64	.....	.....	.....
290. <i>Hydrallmania falcata</i> (L.) .....	.....	25	.....	.....	.....
291. <i>Antennularia ramosa</i> , Lamk. ...	.....	64	.....	.....	.....
292. <i>Aglaophenia tubulifera</i> , Hincks. ....	.....	30-64	.....	.....	.....
293. <i>Plumularia Catharina</i> , Johnst. .	.....	30-50	.....	.....	.....
294. — <i>pinnata</i> (L.) .....	.....	49	.....	.....	.....
295. <i>Bolocera tuediæ</i> (Johnst.) .....	.....	.....	37-104	.....	70
296. <i>Virgularia mirabilis</i> (O.F.Müll.) .....	.....	.....	.....	.....	.....
297. <i>Pennatula phosphorea</i> , L. ....	.....	22-40	.....	.....	.....
29 species.					
PORIFERA.					
298. <i>Suberites ficus</i> (Johnst.) .....	.....	50	45-49	.....	60-75
299. — <i>suberea</i> (Mont.)? .....	.....	20-45	.....	.....	70
300. <i>Tragosia infundibuliformis</i> (Johnst.) .....	.....	50-70	80-104	.....	.....
301. <i>Chalina</i> , sp. ....	.....	.....	.....	.....	.....
302. <i>Myxilla incrustans</i> (Johnst.) ...	.....	50-65	.....	.....	.....
303. <i>Iophon Pattersoni</i> (Bwk.) .....	.....	64-65	80-100	.....	.....
304. <i>Grantia ciliata</i> , Flem. ....	.....	.....	.....	.....	.....
7 species.					

Loch Striven.	Dunoon Basin.	Loch Goil.	Upper Loch Long.	Gareloch.	General Distribution.
.....	40	.....	30	.....	France, U.S.A., Medit. ?
.....	40	.....	.....	.....	Medit.
.....	.....	.....	.....	.....	Shetland, Northumberland.
.....	.....	.....	.....	.....	Greenland and Norway to Bay of Biscay, Medit.
.....	.....	.....	.....	.....	N. Ireland to Channel Is.
.....	.....	.....	.....	.....	Iceland, Norway, U.S.A., Medit.
.....	.....	.....	.....	.....	Norway, U.S.A., Medit. [20-100 fms.
.....	.....	.....	.....	.....	Tide-marks [to 145 fms.
.....	.....	.....	.....	.....	Iceland, Norway. 15-100 fms.
.....	.....	.....	.....	.....	Shetland to Cornwall.
.....	.....	.....	.....	.....	Medit.
.....	.....	.....	.....	.....	Greenland and Norway to Medit., U.S.A. 30-50 fms.
.....	.....	.....	.....	.....	Iceland, U.S.A. 30-50 fms.
.....	.....	.....	.....	.....	Medit.
.....	.....	.....	.....	.....	Normandy. 60 fms.
.....	.....	.....	.....	.....	Greenland, Norway, and Labrador. [30 fms.
.....	.....	.....	.....	.....	Port Adelaide, Medit.
.....	.....	.....	.....	.....	Norway, U.S.A. 30 fms.
.....	.....	.....	.....	.....	Bay of Biscay, U.S.A., Medit.
.....	.....	.....	.....	.....	North Sea, Medit. 40-140 fms.
.....	.....	.....	.....	.....	Greenland and Norway to Medit., U.S.A. 30 fms.
.....	.....	.....	.....	.....	Greenland and Norway to Medit., U.S.A. 4-50 fms.
.....	.....	.....	.....	.....	Belgium, U.S.A., S. Africa. 35 fms.
.....	.....	.....	.....	.....	S. Africa.
.....	.....	.....	.....	.....	Algoa Bay. 15-30 fms.
.....	.....	.....	.....	.....	All British coasts. 40-60 fms.
.....	.....	.....	.....	.....	North Sea, Medit.
.....	.....	35	.....	.....	Scandinavia, U.S.A.
40	.....	40	.....	.....	Norway, Scotland.
.....	.....	.....	.....	.....	European seas.
.....	.....	30-40	30	.....	Hebrides, Northumberland, Mayo.
.....	.....	.....	.....	.....	British coasts.
.....	.....	.....	.....	.....	Shetland to Channel Is.
.....	.....	35	.....	.....	British seas.
.....	.....	.....	.....	.....	Shetland, Patagonia, Tristan da Cunha.
.....	.....	45	.....	.....	British coasts.

## DISCUSSION OF THE RESULTS.

The above Table may be summarized in the more condensed one given below, in which the number of species of each group of animals from each basin is shown.

	ARRAN BASIN.					Upper Loch Fyne.	Loch Striven.	Dunoon Basin.	Loch Goil.	Upper Loch Long.	Gareloch.
	Brodick Basin.	Kilbrennan Basin.	Inchmarnoch Basin.	Cumbræ Basin.	Total.						
Pisces .....	10	29	12	7	36	6	6	20	3	5	7
Tunicata .....	1	...	6	...	6	5	...	2	3	1	
Mollusca .....	24	26	46	16	61	20	13	21	18	8	7
Brachiopoda .....	...	...	1	...	1	1					
Polyzoa .....	...	31	1	...	31						
Crustacea .....	24	29	46	34	75	20	16	31	14	16	15
Vermes .....	6	3	6	...	9	4	1	4	5	1	1
Echinodermata...	3	12	12	6	18	8	5	13	6	6	3
Cœlenterata .....	...	26	5	1	27	3	1	2	2	1	
Porifera .....	...	7	4	...	8	2	...	...	3	1	
Totals.....	68	163	139	64	272	69	42	93	54	39	33

In dealing with these figures great caution must be observed, and it must always be borne in mind that no locality can ever be said to be really exhausted. The number of dredgings upon which the present inquiry is based will only suffice as a basis for very general conclusions. This has been abundantly evident during the progress of the work, for tables like the above have been drawn up several times, and it has been noticed that each successive addition of new data has increased the likeness of the faunas of the different basins to each other.

Certain sources of error must also be avoided; for instance, it was apparent, from an examination of the various lists, that the Polyzoa and Hydrozoa had only been exhaustively examined in

the case of the Kilbrennan Basin. These groups must therefore be left out of account in comparing the different basins with each other. Furthermore, the Worms and Sponges have been very incompletely studied. Many specimens I was only able to refer to their generic position, and hence it seems advisable to omit these groups also from consideration for the present.

Deducting the figures corresponding to them, we have the following modified list of the total numbers of species from each basin:—

Brodict Basin . . . . .	62
Kilbrennan Basin . . . . .	96
Inchmarnoch Basin . . . . .	123
Cumbræ Basin . . . . .	63
	<hr/>
Total from Arran Basin . . . . .	197
Upper Loch Fyne . . . . .	60
Loch Striven . . . . .	40
Dunoon Basin . . . . .	87
Loch Goil . . . . .	44
Upper Loch Long . . . . .	36
Gareloch . . . . .	32

This revised series of totals proves beyond all doubt that the richest fauna is in those basins which are in closest proximity to the sea, and that it diminishes as we proceed into the more land-locked portions of the district. An exception, which is, however, more apparent than real, will be noticed in the fact that a larger number of species has been found in the Inchmarnoch Basin than in either the Brodict or Kilbrennan Basins. This is, I believe, to be explained partly by the fact that the Inchmarnoch Basin is much larger than either of the others, and descends to a greater depth, and partly by the circumstance that more dredgings have been carried out in it. If we take the Arran Basin as a whole the truth of the above proposition is obvious. It is, of course, just what might have been anticipated beforehand in view of the marine origin of the whole fauna, but it is satisfactory to have the matter established by actual investigation.

It will be of some interest to consider the relationships of this fauna as a whole, and particularly to ascertain which of the neighbouring faunas it most closely resembles.

For this purpose use must be made of the distributional notes appended to each species in the list. According to this information the species fall into three categories. The first contains those which range from Scandinavia to the Mediterranean, or even more widely still; these may be termed, for the present purpose, "Wide-spread" species. The second consists of those forms which are common to the Arctic and Scandinavian waters, and hence may be termed "Northern;" whilst the third is made up of species which may be called "Southern," as they extend to the Mediterranean or the African coast.

The following Table shows the numbers of species of the various classes of animals which belong to each of these categories:—

	Wide-spread Species.	Northern Species.	Southern Species.
Pisces .....	23	17	2
Tunicata .....	4	5	
Mollusca and } Brachiopoda ... }	46	22	3
Polyzoa .....	20	5	1
Crustacea .....	32	41	5
Vermes .....	3	3	
Echinodermata .....	10	13	2
Cœlenterata .....	9	4	9
Totals .....	147	110	22

From these figures it appears that the major part of the fauna is composed of species which are dispersed more or less widely over the north temperate regions of the globe, whilst the smaller half is very unequally divided between the northern and southern species, the former being five times as numerous as the latter. In only one division of animals (the Cœlenterata) do the southern forms predominate over the northern, and this subkingdom has been hitherto very inadequately investigated in the Clyde area.

The depth of 20 fathoms as limiting what might be considered the deep-water fauna in the Clyde sea-area was selected not from any preconceived idea as to its significance, but because it was convenient for practical purposes, and because it was applicable to all the lochs, the extreme depth of the Gareloch, which

is the shallowest, being about 23 fathoms. In the case of some of the other basins, however, it is so far from marking out their limits that it does not touch the tops of the ridges which separate them. To Dr. Murray I owe the suggestion that it might be worth while to compare the faunas of the deepest parts of the basins, taking some other contour-line as the upper limit. I have therefore gone over the Table given above and selected from it those species which are found in proximity to the bottom of each basin. The depressions themselves vary so much in depth that I have thought it advisable to record both the forms which are found below the 50-fathom line and (in a separate column) those which are found within, say, 5 to 20 fathoms of the bottom of each basin. Furthermore I have excluded those free-swimming forms whose distribution in regard to depth cannot be regarded as absolutely fixed. On this ground I have omitted the Fishes, Cephalopoda, Amphipoda, and part of the Macrurous Crustacea (viz. the genera *Hippolyte*, *Pandalus*, and their allies); the Polyzoa, Hydroida, and Sponges have also been neglected because they have been insufficiently studied.

In the subjoined Table the following symbols have been used:—

\*=occurring at the depth mentioned in the head of the column.

†=occurring in the locality, but at a depth less than those under consideration in the table.

W = Widely-spread species.

N = Northern species.

S = Southern species.





19. — Montagu, <i>Forbes</i> .....	N.
20. — sordida, <i>Phil.</i> .....	W.
21. Trochus (Gibbula) cinerarius, <i>L.</i> .....	W.
22. — (Zizyphinus) zizyphinus, <i>L.</i> .....	W.
23. — (—) nullegranus, <i>Phil.</i> .....	W.
24. Puncturella Noachina ( <i>L.</i> ) .....	N.
25. Chiton marginatus, <i>Penn.</i> .....	W.
26. Dentalium entalis, <i>L.</i> .....	W.
27. Anomia ephippium, <i>L.</i> .....	W.
28. — patelliformis, <i>L.</i> .....	W.
29. Lima elliptica, <i>Jeffr.</i> .....	W.
30. Peecten opercularis ( <i>L.</i> ) .....	W.
31. — pusio ( <i>L.</i> ) .....	W.
32. — septemradiatus, <i>Müll.</i> .....	W.
33. — striatus, <i>Müll.</i> .....	N.
34. Modiola barbata ( <i>L.</i> ) .....	S.
35. Nucula nitida, <i>Sow.</i> .....	W.
36. — nucleus ( <i>L.</i> ) .....	W.
37. — sulcata, <i>Bronn</i> .....	W.
38. — tenuis ( <i>Mont.</i> ) .....	N.
39. Leda minuta ( <i>Müll.</i> ) .....	N.
40. Astarte elliptica, <i>Brown</i> .....	W.
41. — sulcata ( <i>Da C.</i> ) .....	W.
42. Cardium fasciatum, <i>Mont.</i> .....	N.
43. — minimum, <i>Phil.</i> .....	N.
44. Cyprina islandica ( <i>L.</i> ) .....	W.
45. Isocardia cor ( <i>L.</i> ) .....	W.
46. Venus ovata, <i>Penn.</i> .....	W.
47. Cryptodon ferruginosus ( <i>Forbes</i> ) .....	W.
48. — flexuosus ( <i>Mont.</i> ) .....	W.
49. — eroulinenis ( <i>Jeffr.</i> ) .....	W.
50. Maetra elliptica, <i>Brown</i> .....	N.
51. Corbula gibba, <i>Olivier</i> .....	W.
52. Saxicava rugosa ( <i>L.</i> ) .....	N.







If the preceding table be summed up in the same manner as the first one the result is found to be as follows :—

	ARRAN BASIN.							Upper Loch Fyne.		Loch Striven.	Dunoon Basin.	Loch Goil.	Upper Loch Long.
	Brodiek Basin.		Kilbrennan Basin.		Inchmarnoch Basin.		Cumbræ Basin.						
	50 to 92.	75 to 92.	50 to 85.	70 to 85.	50 to 104.	80 to 104.	50 to 62.	50 to 77.	65 to 77.	35 to 41.	40 to 55.	35 to 40.	30 to 34.
Tunicata .....	1	...	...	...	5	5	.....	5	3	...	2	3	1
Mollusca .....	22	9	9	3	23	21	16	15	8	12	17	16	7
Brachiopoda .....	...	...	...	...	1	1	.....	1					
Crustacea .....	10	9	9	2	13	12	15	8	6	7	13	6	6
Vermes .....	4	4	1	1	3	3	.....	4	2	1	3	4	1
Echinodermata .....	3	2	7	6	9	9	5	6	3	6	7	3	6
Totals .....	40	24	26	12	54	51	36	39	22	26	42	32	21

It is obvious at once that these numbers do not show so clearly as those previously obtained the gradual diminution in the number of species in the different basins. There is a slight tendency in this direction, but the exceptions are rather numerous, and if we take the bottom faunas of each basin instead of that below 50 fathoms the series of numbers is :—

24, 12, 51, 36, 22, 26, 42, 32, 21.

This result is extremely interesting because it seems to show that the bottoms of the remoter basins have a fauna which approaches the more seaward basins in respect of variety more nearly than do their faunas taken as a whole. It suggests the possibility that we have in these basins, in addition to the fauna derived from the present outer seas, which seems to be gradually making its way into them, a fauna which has been in them for a much longer period.

Regarding the range of distribution of the species which are confined to these depressions we find :—

	Wide-spread Species.	Northern Species.	Southern Species.
Tunicata .....	4	5	
Mollusca .....	30	15	2
Brachiopoda .....	1		
Crustacea .....	15	12	2
Vermes .....	3	3	
Echinodermata .....	10	6	1
Totals .....	63	41	5

Here, curiously enough, the wide-spread forms preponderate over the others more than was the case in the previous list; but it is noteworthy that the percentage of southern forms has diminished, which emphasizes still more strongly the Arctic and Scandinavian affinities of the Clyde deep-water fauna. These results illustrate in a very interesting manner several of the generalizations of the late Edward Forbes.

In conclusion, I may be allowed to express the hope that the facts recorded above may furnish the nucleus of more extended series of observations. I hope to continue the work as opportunities arise, and I shall be extremely grateful to any naturalists who will furnish me with records of the occurrence, with the exact locality and depth, of any species in the Clyde sea-area or neighbouring seas.

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BATHYGRAPHICAL CHART OF THE CLYDE SEA AREA.

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